

conductor patterns, viewed along a direction perpendicular to the substrate, each substantially completely cover the substrate.

16. The display device of claim 15, wherein the first conductor pattern comprises a plurality of first electrodes separated from each other by a first partitioning path, and wherein the first partitioning path has a minimal path width along at least 80% of a length thereof.

17. The display device of claim 16, wherein the partitioning path is at least partially filled with an insulating material.

18. The display device of claim 16, wherein the second conductor pattern comprises a plurality of sub-electrodes.

19. The display device of claim 18, wherein the plurality of second electrodes are separated from each other by a second partitioning path, and wherein the second partitioning path has a minimal path width along at least 80% of a length thereof.

REMARKS

Reexamination and reconsideration of the present application are requested.

Applicants have amended claims 9, 10 and 15 to correct minor typographical errors. Accordingly, claims 1 and 3-19 remain pending in the application.

35 U.S.C. § 112

Applicants have amended claim 15 to correct a typographical error. Accordingly, it is respectfully submitted that claim 15 fully satisfies the requirements of 35 U.S.C. § 112.

35 U.S.C. § 102

Claims 1 and 3-5

The Office Action rejected claims 1-5 over Morimoto.

Applicants respectfully traverse those rejections and submit that claims 1-5 are patentable over Morimoto for at least the following reasons.

Among other things, in the display device of claim 1, the parts of the conductor pattern are substantially mutually separated by partitioning paths having a minimal path width.

The Office Action has attempted to define “minimal” in accordance with a convenient one among many definitions provided by Miriam-Webster’s Collegiate dictionary, Tenth Edition.

However, Applicants respectfully submit that such a definition is not in accordance with the rules of claim interpretation provided by M.P.E.P. § 2111.01, which states that an Applicants may provide their own particular definition of a claim term in the specification, as long as the meaning assigned to the term is not repugnant to the term’s well known usage (citing In re Hill, 161 F.2d 367, 73 U.S.P.Q. 482

(C.C.P.A. 1947).

Here, the specification states that:

“The maximum distance between parts of the conductor pattern is defined in that parts of the conductor pattern are mutually separated by partitioning paths having a minimal path width. As stated, this distance depends on process parameters but particularly on the tolerances of the photolithographic process used. The minimal path width is usually so small (<25 um) that the separation between parts of the conductor pattern is not visible or hardly visible.

Although the words ‘minimal path width’ are used in this context, it will be evident that this minimal path width will not have a constant value in practice, but may locally vary to some extent due to the influence of, for example, etching rates, dust particles, or other influences.”

(page 2, lines 24-33).

Therefore, it is respectfully submitted that the Applicants have clearly indicated and provided in the specification a specific definition of the term “minimal path width” as pertaining to a minimal path width that can be provided by available process tolerances, particularly, photolithography tolerances (see also page 3, lines 7-8; page 4, lines 33-34).

Accordingly, Applicants having provided a clear definition of “minimal path width” in the specification and therefore it is respectfully submitted that the Office Action’s substitution of a conveniently-selected dictionary definition is improper under M.P.E.P. § 2111.01.

Meanwhile, Morimoto is silent about providing such a minimal path width between adjacent parts of the conductor pattern.

Accordingly, for at least this reason, it is respectfully submitted that the device of claim 1 is patentable over Morimoto.

Furthermore, the device of claim 1 includes a conductor pattern, parts of which define pixels, wherein at least within a viewing area of the display device, the conductor pattern, viewed transversely to the substrate along a direction from the conductor pattern toward the substrate, substantially covers the corresponding part of the first substrate.

In the last paragraph on pages 2, the Office Action picks and chooses various incompatible pieces of two different devices disclosed by Morimoto to cobble together some semblance of the device of claim 1. For example, paragraph 5 starts out discussing elements 12 and 13, which are shown in FIG. 6 of Morimoto. FIG. 6 pertains **a first device**, which is more clearly shown in FIG. 2. Then, the Office Action states that parts of elements 12 and 13 form pixels P which shown in FIG. 7.

However, Morimoto discloses that **FIG. 7 pertains to a completely different device than the device shown in FIG. 6** (see col. 3, lines 15-17). There is no indication in Morimoto that the layer 13 is even present in the device of FIG. 7! Also,

Morimoto clearly teaches that the layer 12 in the device of FIG. 7 is configured very differently than the layer 12 in the device of FIG. 6 (see col. 7, lines 8-24) (e.g., “*Thus it will be noted that the metal film 12 is left at only areas shown in oblique lines*”).

So, in the device of FIG. 7, the metal film 12 clearly does not even have any “parts . . . which define pixels.” In the device of FIG. 7 (unlike the device of FIG. 6), the pixels are instead defined by the connecting elements 16, not the metal film 12. Again, there is no disclosure in Morimoto that the device of FIG. 7, which has the separate connecting elements 16 that define the pixel elements, even includes any conductor pattern 13. Column 4, lines 11-12 of Morimoto, cited in paragraph 5 of the Office Action, similarly pertains to the device of FIGs. 2-6, and is not applicable to the device of FIG. 7.

Accordingly, the Office Action has failed to indicate how and where Morimoto allegedly discloses a device having a conductor pattern, parts of which define pixels, wherein at least within a viewing area of the display device, the conductor pattern, viewed transversely to the substrate along a direction from the conductor pattern toward the substrate, substantially covers the corresponding part of the first substrate.

Accordingly, for at least this additional reason, it is respectfully submitted that the device of claim 1 is patentable over Morimoto.

Claims 3-5, dependent from claim 1 are deemed patentable for similar reasons, and for the following additional reasons.

Claim 3

Among other things, the display device of claim 3 includes partitioning paths having a substantially constant path width.

No such feature is disclosed in Morimoto.

The Office Action stated that such a feature is shown in FIG. 7. Applicants respectfully disagree.

Indeed, to the extent that anything is revealed in Morimoto et al., FIG. 7 seems to indicate sharp corners throughout the partitioning path, instead of a curved shape which could provide a substantially constant path width. The width at these sharp corners is self-evidently greater than the width along the sides. Accordingly, apparently the partitioning paths do not have a substantially constant path width. Thus, FIG. 7 is apparently contrary to the device claimed in claim 3.

Accordingly, for at least this additional reason, it is respectfully submitted that the device of claim 3 is patentable over Morimoto.

Claim 5

Among other things, in the display device of claim 5, at least 80% of the partitioning paths have a minimal path width.

No such feature is disclosed in Morimoto.

The Office Action stated that such a feature is shown in FIG. 7. Applicants respectfully disagree.

As noted above, Applicants have defined the term minimal path width in the specification.

Also as noted above, Morimoto is completely silent about providing a minimal path width between adjacent parts of the conductor pattern. Furthermore, it is not possible from inspection of FIG. 7 to determine that any portion of the partitioning paths have a minimal path width - and it is certainly not possible to determine that 80% have a minimal path width.

Also, regarding the statement in the Office Action that applicant's disclosure teaches that minimal paths are not achieved in places where the partition paths form a corner, that is true. But that is completely different from teaching that minimal paths are not achieved only in places where the partition paths form a corner. That is NOT taught by Applicant's disclosure. Applicants do not believe that one can tell from FIG. 7 that more than 80% of the partitioning paths did have a straight or curved path. However, even assuming, *arguendo*, that more than 80% of the partitioning paths in FIG. 7 of Morimoto did have a straight or curved path, that would not mean that 80% of the partitioning paths had a minimal path width.

Accordingly, for at least this additional reason, it is respectfully submitted that the device of claim 5 is patentable over Morimoto.

Claims 6-9

The Office Action rejected claims 6-9 over Khan.

Among other things, the devices of claims 6-9 each include a conductor pattern, parts of which define pixels, wherein at least within the viewing area of the display device, the conductor pattern, viewed transversely to the substrate along a direction

from the conductor pattern toward the substrate, substantially covers the corresponding part of the first substrate.

No such feature is disclosed by Khan.

The Office Action states that Khan discloses a plurality of elongated electrode strips each having a width of 244 microns and a space therebetween of 15-20 microns.

However, Khan never gives any hint or suggestion at all that these elongated electrode strips extend to substantially cover the entire viewing area of the display device. Khan does not indicate the extent of these elongated electrode strips in either direction (either the length or width of the device).

Accordingly, Khan clearly does not disclose or suggest a display device having a conductor pattern, parts of which define pixels, wherein at least within a viewing area of the display device, the conductor pattern, viewed transversely to the substrate along a direction from the conductor pattern toward the substrate, substantially covers the corresponding part of the first substrate.

Furthermore, claim 9 includes a feature wherein a distance between adjacent parts of the conductor pattern is substantially constant. Meanwhile, Khan is silent about whether or not the distance between adjacent parts of the conductor pattern is substantially constant.

Accordingly, for at least these reasons, it is respectfully submitted that claims 6-9 are all patentable over Khan.

Claims 10-11 and 13-14

The Office Action rejected claims 10-11 and 13-14 over Khan.

Claims 10-11 and 13-14 all include a first conductor pattern on a side of the first substrate nearest the second substrate, defining pixels of the display device and, within a viewing area of the device, substantially completely covering the first substrate, and a second conductor pattern, on a side of the second substrate nearest the first substrate, that substantially completely covers the second substrate.

No such feature is disclosed by Khan.

The Office Action states that Khan discloses a plurality of elongated electrode strips each having a width of 244 microns and a space therebetween of 15-20 microns.

However, Khan never gives any hint or suggestion at all that these elongated electrode strips extend to substantially cover any substrate. Khan does not indicate the extent of these elongated electrode strips in either direction (either the length or the width of the substrate).

Accordingly, Khan clearly does not disclose or suggest a display device having a first conductor pattern on a side of the first substrate nearest the second substrate, defining pixels of the display device and, within a viewing area of the device, substantially completely covering the first substrate, and a second conductor pattern, on a side of the second substrate nearest the first substrate, that substantially completely covers the second substrate.

Furthermore, with respect to claim 13, Khan is completely silent about the first and second partitioning paths having any minimal path width. As explained above,

the term “minimal path width” has a specifically defined meaning in the specification and cannot be improperly construed to mean any so-called “very small” path width by resort to some external dictionary definition. Moreover, Khan is certainly silent about the first and second partitioning paths having any minimal path width along at least 80% of a length thereof.

Accordingly, for at least these reasons, it is respectfully submitted that claims 10-11 and 13-14 are all patentable over Khan.

Claims 15-19

The Office Action rejected claims 15-19 under 35 U.S.C. § 102(b) over Young.

At the outset, claims 15-19 all include a first conductor pattern on a substrate, defining pixels of the display device, and a second conductor pattern disposed on the electroluminescent material, wherein within the viewing area of the display device, the first and second conductor patterns, viewed along a direction perpendicular to the substrate, each substantially completely cover the substrate.

No such feature is disclosed by Young.

The Office Action states that Young discloses conductor patterns 8 and 2, at least one of which, viewed in the direction of the conductor pattern 2 towards the substrate 1, substantially covers the corresponding part of the first substrate.

However, that is not what is claimed in claims 15-19. Instead, claim 15 recites that, viewed along a direction perpendicular to the substrate, the first and second conductor patterns each substantially completely covers the substrate within the viewing area of the display device.

Moreover, Young never gives any hint or suggestion at all that the electrode strips 2 or 8 substantially cover a substrate within the viewing area of the display device.

Furthermore, in the display devices of claims 15-19, the first conductor pattern defines pixels of the device. Meanwhile, the Office Action fairly admits that pixels in Young are not defined by the first conductor pattern, but instead are defined by locations where the second conductor pattern 8 overlaps the first conductor pattern (Office Action at page 5, lines 18-19). Accordingly, it is not possible for Young to disclose the device of claims 15-19.

Furthermore, with respect to claims 16 and 19, Young is completely silent about any first or second partitioning paths having any minimal path width. As explained above, the term “minimal path width “ has a specifically defined meaning in the specification and cannot be improperly construed to mean any so-called “very small” path width by resort to some external dictionary definition. Moreover, Young is certainly silent about any first or second partitioning paths having any minimal path width along at least 80% of a length thereof.

Accordingly, for at least these reasons, it is respectfully submitted that claims 15-19 are all patentable over Young.

35 U.S.C. § 103

Claim 12

The Office Action rejected claim 12 over Khan in view of Young.

Among other things, in the display device of claim 12 the first and second partitioning paths are substantially aligned.

The Office Action fairly admits that such a feature is not disclosed in Khan.

However, the Office Action states that: (1) “it is well known in the art” to have electrodes strip aligned with the viewing area of the display device as evidenced by Young; and (2) therefore partitioning paths separating rows and columns will also be aligned with viewing area.

At the outset, claim 12 recites that the first and second partitioning paths are substantially aligned within the viewing area of the display device. Meanwhile, the Office Action discusses whether the “portioning paths” in the proposed combination of Khan and Young would be aligned with the viewing area. Applicants respectfully cannot understand how any partitioning part could be “aligned with a viewing area” or what such a phrase would mean. In any event, this is not what Applicants have claimed.

Applicants do not see any assertion in the Office Action that any combination of Khan and Young would produce any device where the first and second partitioning paths are substantially aligned. Moreover, as can be clearly seen in FIG. 1, the first and second partitioning paths in Young are clearly not aligned. That is, the partitioning paths between the electrode strips 8 extend in a vertical direction, while the partitioning paths between the electrode strips 2 extend in a horizontal direction.

So, in direct contrast to the feature of claim 1 where the first and second partitioning paths being aligned, in Young the first and second partitioning paths project perpendicularly onto each other!

Therefore, no possible combination of Khan and Young could produce the device of claim 12.

Finally, Applicants respectfully traverse the Examiner's statement that "it is well known in the art to have the electrode strips aligned with the viewing area of the display device" and request that the Examiner provide support for this assertion. Again, Applicants do not even understand what this means.

Accordingly, for at least these reasons, Applicants respectfully submit that claim 12 is patentable over any combination of Khan and Young, and therefore Applicants respectfully request withdrawal of the rejection of claim 12 under 35 U.S.C. § 103.

CONCLUSION

In view of the foregoing explanations, Applicants respectfully request that the Examiner reconsider and reexamine the present application, allow claims 1 and 3-19, and pass the application to issue.


If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No.

50-0238 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17, particularly extension of time fees.

Respectfully submitted,

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Version with Markings to Show Changes Made

In the Claims:

Claims 9, 10 and 15 have been amended as follows.

9. (Amended) The display device of claim 1, wherein [the] a distance between adjacent parts of the conductor pattern is substantially constant.

10. (Amended) A display device comprising:
first and second substrates separated and confronting each other,
a first conductor pattern on a side of the first substrate nearest the second substrate, the first [conductive] conductor pattern defining pixels of the display device,
and

a second conductor pattern on a side of the second substrate nearest the first substrate,

wherein, within a viewing area of the device, the first conductor pattern substantially completely covers the first substrate, and

wherein, within the viewing area of the display device, the second conductor pattern substantially completely covers the second substrate.

15. (Amended) A display device, comprising:

a substrate;

a first conductor pattern disposed on the substrate, the first conductor pattern defining pixels of the display device;

an electroluminescent material disposed on the first conductor pattern;

a second conductor pattern disposed on the [insulating] electroluminescent material,

wherein within the viewing area of the display device, the first and second conductor patterns, viewed along a direction perpendicular to the substrate, each substantially completely cover the substrate.